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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,289	09/08/2005	Alistair Chalmers Ramsay Brown	JMYS-124US	2954

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VALLEY FORGE, PA 19482-0980

EXAMINER
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CHU, YONG LIANG

ART UNIT	PAPER NUMBER
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1626

MAIL DATE	DELIVERY MODE
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07/24/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/528,289	BROWN, ALISTAIR CHALMERS RAMSAY	
	Examiner	Art Unit	
	Yong Chu	1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

Claims 1, 7, and 9 have been amended by the Amendment filed on 05/02/2007. Claims 10-12 are new by the Amendment. Therefore, Claims 1-12 are pending in this application.

### ***Response to Amendment***

The Amendment by Applicants' representative Christopher R. Lewis dated on 05/02/2007 has been entered.

### ***Response to Arguments***

#### **Arguments over Lack of Unity**

Applicants have amended claims 7 and 9 to be dependent on claim 3 of Group I. Applicant's argument that all the claims share the same "special technical features" as the step claimed in claim 1 has been fully considered, and are found persuasive. Therefore, the restriction requirement due to lack of unity of invention has been withdrawn, and claims 1-12 will be examined together.

#### **Claim Objection**

Applicant's argument over objection of claim 1 for requiring "aliphatic" before alcohol has been fully considered, and is found not persuasive. It is because that the scope of aldehyde and alcohol should be consistent, which should be clearly reflected in the claim. The objection is indeed proper, and therefore, is maintained.

#### **Arguments over rejection of claim 6 under 35 U.S.C. §112, second paragraph**

Applicant's argument over rejection of claim 6 under 35 U.S.C. §112, second

paragraph for the definition of a period of time sufficient to provide 0.2 to 10 kg sulfur is persuasive. Therefore, the rejection has been withdrawn.

**Arguments over rejection of claims under 35 U.S.C. §102(b)**

Applicant has amended claim 1, and the rejection of claims 1-5 under 35 U.S.C. §102(b) is moot.

Applicant's arguments over rejection of claims 1-5, as amended, under 35 U.S.C. §103(a) have been fully considered, but are found not persuasive. Applicant's argument is on the ground that the disclosure of Mills (U.S. Patent No. 4,052,467 (the '467 patent) is directed to precisely doing the opposite of the process as claimed in the present application. Therefore, the step of treating the hydrogenation catalyst with an organic sulfur compound is not taught, disclosed or suggested in Mills because such treatment is avoided in Mills. (last paragraph, page 7 under Remarks/Arguments).

Applicant's analysis does not reflect the teaching or suggesting in the '467 patent. First, as stated in the previous Office action on 01/31/2007, the '467 patent did disclose a process for reducing aldehyde to the corresponding alcohols in the presence of thiophene and other ring type sulfur compounds (organic sulfur compound) column 1 of the '467 patent. Second, the statement made by Applicant that the process as claimed in amended claim 1, sulfur compounds are added to a feed stream with the intention that they are decomposed so that the catalyst is treated with sulfur, is not disclosed in the original disclosure of the instant application. In stead, claim 1 of the instant application discloses that "treating the hydrogenation catalyst with organic sulfur compound", not sulfur. Third, the sulfur used in Mills method (the '467 patent) is not

small amounts of impurity, instead it is an organic sulfur compound from 10 ppm and up to 1 weight percent of sulfur in the form of thiophen or other ring-type sulfur compounds (line 46-69, column 1). Finally, Applicant's statement of 2<sup>nd</sup> paragraph page 8 under Remarks/arguments as follows:

In the process as claimed in independent claim 1, however, the sulphur is added to the feed stream in order to achieve a desired level of treatment of the catalyst. Therefore, Applicant contends that Applicant's claimed process is differentiated from Mills. Mills does not disclose that a sulphur compound should be added to an aldehyde feed. Rather, Mills teaches that sulphur compounds are undesirable because they can deactivate a catalyst and that, should a feed contain sulphur compounds, the hydrogenation conditions should be selected to ensure that the catalyst is not affected by the sulphur, i.e., that it is not treated with an organic sulphur compound. Thus, the teaching of Mills is directly contradictory to the process as claimed in claim 1.

This statement clearly indicated that sulfur not organic sulfur is added to the feed stream in order to achieve a desire level of the treatment of the hydrogenation catalyst. However, claim 1 of the instant application clearly defines the process by adding organic sulfur compound, not sulfur compound. It fails to set forth the subject matter, which applicant(s) regard as their invention. Therefore, the rejection of claims 1-5 under 35 U.S.C. §102(b) is maintained.

**Arguments over rejection of claims under 35 U.S.C. §103(a)**

Applicant's arguments over rejection of claims 6 and 8 *under 35 U.S.C. §103(a)* have been fully considered, but are found not persuasive. Applicant's argument is on the ground that the Office Action must provide either evidence of a motivation, or, if no evidence is provided, an explanation of the specific understanding or technical principle for the motivation. Adding step (c) into an obvious process of step (a)-(b) does not

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make the combined process non-obviousness, because such step (c) is within the common knowledge to one skilled in the art in considering the nature of the specific problem of hydrogenation of aldehyde to alcohol. Adding additional process step is not a patentable modification in the absence of unobvious results, in view of open-ended claiming language of the prior art (the '467 patent).

In term of the concentration of thiophene, Applicant's finding that 0.05 weight percent corresponds to 500 ppm is correct in part. However, the sulphur compound concentration of 150ppm is within the claimed range of 10-10,000 ppm range as suggested in the '467 patent (see line 47-50, column). Therefore, the rejection of claims 6 and 8 *under 35 U.S.C. §103(a)* is maintained.

**Arguments over rejection of Obviousness Double-Patenting Rejection**

The arguments over rejection of claims 6 and 8 over *Obviousness Double-Patenting* have been fully considered, but are found not persuasive. See the statement *supra*. Therefore, the rejection is maintained.

**Rejection of amended claims 1-12 under 35 U.S.C. §103(a)**

Amended claims 1-12 are rejected under 35 U.S.C. §103(a) as unpatentable over the '467 patent. The previous Office Action and above response are apply to the amended claims 1-12, because they share the "special technical features" as stated by Applicant. Organic sulfur compound of benothiophene and thiol are suggested by the '467 patent as other ring-type sulfur compounds line 23-28 column.

**Rejection of claims 1-12 under 35 U.S.C. §112, second paragraph**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. Evidence that claims 1-12 fail(s) to correspond in scope with that which applicant(s) regard as the invention can be found in the reply filed 05/02/2007. In that paper, applicant has stated "In the process as claimed in amended independent claim 1, by contrast, sulphur compounds are added to a feed stream with the intention that they are decomposed so that the catalyst is treated with sulfur", and this statement indicates that the invention is different from what is defined in the claim(s) because amended claim 1 claim a process comprising a step by adding organic sulphur compound to a feed stream, not a decomposed sulfur. The instant application does not disclose using deposited sulfur compound to treat the hydrogenation catalyst.

### ***Conclusion***

No claim is allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not


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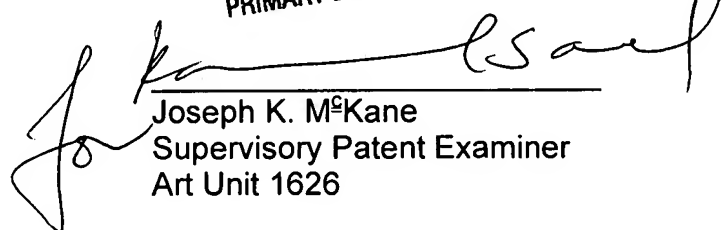
mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Telephone Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yong Chu whose telephone number is 571-272-5759. The examiner can normally be reached on 7:00 am - 3:30 pm EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph M<sup>re</sup>Kane can be reached on 571-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

  
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